

OFFICIAL GAZETTE

GOVERNMENT OF GOA

GOVERNMENT OF GOA

Agriculture Department

ORDER

10-1-79-AGR VOL. VIII

Government of India, Ministry of Agriculture (Department of Agriculture and Cooperation), New Delhi Order No. 1-2/89-Fert-Law dated 31-8-1990 published in the Gazette of India (Extraordinary) Part II, Section 3, Sub-section (ii) is hereby republished in the Official Gazette for general information of the public.

D. N. Accawade, Under Secretary (Agriculture).
Panaji, 18th October, 1990.

ORDER

S.O. 675(E). In exercise of the powers conferred by section 3 of the Essential Commodities Act, 1955 (10 of 1955), the Central Government hereby makes the following order further to amend the Fertiliser (Control) Order, 1985, namely:—

1. (1) This Order may be called Fertiliser (Control) (Fourth Amendment) Order, 1990.

(2) It shall come into force on the date of its publication in the Official Gazette.

2. In sub-section (3) of clause 13 of the Fertiliser (Control) Order, 1985, for the words "two years", the words "upto 27th July, 1991" shall be substituted.

Sd/-
(R. M. Sethi)

Joint Secretary to the Government of India.

Note:— 1. The Fertiliser (Control) Order, 1985 was published vide GSR (E) dated 25th September, 1985 and subsequently amended by,—

- (i) GSR 201(E) dated 14th February, 1986.
- (ii) GSR 1160(E) dated 21st October, 1986.
- (iii) S.O. 822(E) dated 14th September, 1987.
- (iv) S.O. 1079(E) dated 11th December, 1987.
- (v) S.O. 252(E) dated 11th March, 1988.
- (vi) S.O. 724(E) dated 28th July, 1988.
- (vii) S.O. 725(E) dated 28th July, 1988.

- (viii) S.O. 940(E) dated 11th October, 1988.
- (ix) S.O. 498(E) dated 29th June, 1989.
- (x) S.O. 581(E) dated 27th July, 1989.
- (xi) S.O. 763(E) dated 25th August, 1989.
- (xii) S.O. 738(E) dated 15th September, 1989.
- (xiii) S.O. 140(E) dated 12th February, 1990.
- (xiv) S.O. 271(E) dated 29th March, 1990.
- (xv) S.O. 403(E) dated 23rd May, 1990.

Department of Community Development and Panchayats

ORDER

1/15(2)/90-CDP

In exercise of the powers conferred by sub-section (1) of section 7 of Goa, Daman and Diu Village Panchayats Regulation, 1962 (No. 9 of 1962), read with Government Notification No. 1/15(6)/84-F&A (3) dated 19-10-1987, I, Bansi Dhar, Secretary (Panchayats), Government of Goa, hereby amend the Government Notification No. 1/15(2)/90-CDP dated 25-7-1990 published in the Official Gazette Series I, No. 21, dated 23rd August, 1990 (hereinafter referred to as the 'said Notification'), as follows:—

In the Schedule to the said Notification:—

(i) in village Davorlim-Dicarpale of Salcete-Mormugao Block in Serial No. 7,—

- (a) in column 5, for the figure '5', the figure '9' shall be substituted; and
- (b) in column 6, for the figure '1', the figure '6' shall be substituted.

(ii) in village Dharbandora of Sanguem Block in Serial No. 9,—

- (a) in column 5, for the figure '5', the figure '7' shall be substituted; and
- (b) in column 6, for the figure '1', the figure '6' shall be substituted.

Bansi Dhar, Secretary (Panchayats).

Panaji, 22nd October, 1990.

Law (Legal and Legislative Affairs) Department

Notification

10-6-90/LA

The following Notifications received from the Government of India, Ministry of Environment and Forests (Department of Environment, Forests and Wildlife), New Delhi, are hereby published for the general information of the public.

P. V. Kadnekar, Under Secretary (Drafting).

Panaji, 6th February, 1990.

MINISTRY OF ENVIRONMENT AND FORESTS

(Department of Environment, Forests and Wildlife)

Notification

New Delhi, the 27th October, 1989

G.S.R. 931(E).—In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

1. (1) These rules may be called the Environment (Protection) Second Amendment Rules, 1989.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986 (hereinafter referred to as the principal rules), in rule 2,—

(i) after clause (a), the following clause shall be inserted, namely:—

“(aa)” “areas” means all areas where the hazardous substances are handled;”;

(ii) after clause (e), the following clause shall be inserted, namely:—

“(ee)” “prohibited substance” means the substance prohibited for handling;”.

(iii) after clause (f), the following clause shall be inserted, namely:—

“(f)” “restricted substance” means the substance restricted for handling;”.

3. In the principal rules, after rule 12, the following rule shall be inserted, namely:—

“13. Prohibition and restriction on the handling of hazardous substances in different areas:—

(1) The Central Government may take into consideration the following factors while prohibiting or restricting the handling of hazardous substances in different areas:—

(i) The hazardous nature of the substance (either in qualitative or quantitative terms as far as may be) in terms of its damage causing potential to the environment, human beings, other living creatures, plants and property;

(ii) the substances that may be or likely to be or readily available as substitutes for the substances proposed to be prohibited or restricted;

(iii) the indigenous availability of the substitute, or the state of technology available in the country for developing a safe substitute;

(iv) the gestation period that may be necessary for gradual introduction of a new substitute with a view to bringing about a total prohibition of the hazardous substance in question; and

(v) any other factor as may be considered by the Central Government to be relevant to the protection of environment.

(2) While prohibiting or restricting the handling of hazardous substances in an area including their imports and exports the Central Government shall follow the procedure hereinafter laid down:—

(i) Whenever it appears to the Central Government that it is expedient to impose prohibition or restriction on the handling of hazardous substances in an area, it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

(ii) Every notification under clause (i) shall give a brief description of the hazardous substances and the geographical region or the area to which such notification pertains and also specify the reasons for the imposition of prohibition or restriction on the handling of such hazardous substances in that region or area.

(iii) Any person interested in filing an objection against the imposition of prohibition or restrictions on the handling of hazardous substances as notified under clause (i) may do so in writing to the Central Government within sixty days from the date of publication of the notification in the Official Gazette.

(iv) The Central Government shall within a period of ninety days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may impose prohibition or restrictions on the handling of hazardous substances in a region or an area”.

[No. 1-48/86-PL/HSMD]

DR. G. SUNDARAM, Jt. Secy.

Principal rules published vide S.O. No. 844(E) dt. 19th Nov., 1986. Amending rules published vide S.O. 82(E) dt. 16th Feb., 87; S.O. 393(E) dt. 16th April, 1987; S.O. 443(E) dt. 28th Apr., 1987; S.O. 64(E) dt. 18th Jan., 1988, GSR 919(E) dt. 12th Sept., 1988 and S.O. 8(E) dt. 3rd Jan. 1989.

Notification

New Delhi, the 31st October, 1989

PROHIBITION ON THE USE OF BENZIDINE-BASED DYES AND ITS SALTS

S.O. 881(E).—In exercise of the powers conferred by clause (d) of sub-section (2) of section 6 of the Environment (Protection) Act, 1986 (29 of 1986), read with rule 13 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies the prohibition and restriction on the use of benzidine-based dyestuffs in the dyeing and colour processing industries.

The use of Benzidine-based Dyes and Dye Intermediates.

1. Application.—This notification shall apply in respect of the prohibited substances as defined in the Environment (Protection) Rules, 1986, handled and the process incidental thereto in the course of which these substances are formed or carried on.

2. Prohibited substances.—For the purpose of this notification, the following chemical substances shall be classified as "prohibited substances" except when these substances are present or formed as by-product of a chemical reaction in a total concentration not exceeding one per cent:—

- (i) benzidine and its salts; and
- (ii) any substance containing any of these compounds.

3. Brief description.—Benzidine and Benzidine hydrochloride are important intermediates for the manufacture of dyes. Benzidine is white or slightly reddish crystalline powder with a melting point 115°C to 120°C when slightly heated. It darkens on exposure to air and light. These are produced by the reduction of nitrobenzidine with zinc and sodium hydroxide. The resulted hydrobenzidine is heated with the acid and its compounds have two phenols with two amino groups attached to them. These are also known as byphenyldiamine or diaminodisphenyl. Benzidine-based commercial dyes include direct orange (1), direct red (1), direct red (13), direct red (28), direct blue (2), direct blue, direct brown (2), direct brown (95), direct black (38) and acid red (85).

4. Dyes and dye-intermediates.—All dyes and dye-intermediates containing benzidine and its derivatives shall be prohibited for "handling". The use of benzidine-based dyes also called as benzidine-azo dyes shall be required to be discontinued within three years from the time of issue of this notification.

5. Extension.—The prohibition on the handling of benzidine-based dyes is applicable to whole of India.

6. Filing of objections.—Any person interested in filing an objection against the imposition of prohibition or restrictions on the handling of hazardous substances as notified may do so in writing to the Joint Secretary, Ministry of Environment and Forests, Paryavaran Bhavan,

Central Government Office Complex Lodi Road, New Delhi-110003, within sixty days from the date of publication of this notification in the Official Gazette.

[No. 1-48/86-PL/HSMD]

DR. G. SUNDARAM, Jt. Secy.

Notification

New Delhi, the 27th November, 1989

S.O. 966(E).—In exercise of the powers conferred by Sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely:—

1. *Short title and commencement.*—(1) These rules may be called the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. *Definitions.*—In these rules, unless the context otherwise requires;—

- (a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) "Authority" means an authority mentioned in Column 2 of Schedule 5;
- (c) "export" with its grammatical variations and cognate expression, means taking out of India to a place outside India;
- (d) "exporter" means any person under the jurisdiction of the exporting country and includes the exporting country, who exports hazardous chemical;
- (e) "hazardous chemical" means,—
 - (i) any chemical which satisfies any of the criteria laid down in Part I of Schedule I and is listed in Column 2 of Part II of this Schedule;
 - (ii) any chemical listed in Column 2 of Schedule 2;
 - (iii) any chemical listed in Column 2 of Schedule 3;
- (f) "import", with its grammatical variations and cognate expression, means bringing into India from a place outside India;
- (g) "importer" means an occupier or any person who imports hazardous chemicals;
- (h) "industrial activity" means,—
 - (i) an operation or process carried out in an industrial installation referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process, as the case may be; or
 - (ii) isolated storage; or
 - (iii) pipeline;

(i) "isolated storage" means storage of a hazardous chemical, other than storage associated with an installation on the same site specified in Schedule 4 where that storage involves atleast the quantities of that chemical set out in Schedule 2;

(j) "major accident" means an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environments;

(k) "pipeline" means a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in Column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute; the pipeline also includes inter-state pipelines;

(l) "Schedule" means Schedule appended to these rules;

(m) "site means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;

(n) "Threshold quantity" means, —

(i) in the case of a hazardous chemical specified in Column 2 of Schedule 2, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4;

(ii) in the case of a hazardous chemical specified in Column 2 of Part I of Schedule 3, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4 of that part;

(iii) in the case of substances of a class specified in Column 2 of Part II of Schedule 3, the total quantity of all substances of that class specified in the corresponding entry in Columns 3 & 4 of that part.

3. *Duties of authorities.*—Subject to the other provisions of these rules, the authority shall perform duties as specified in Column 3 of Schedule 5.

4. *General responsibility of the occupier during industrial activity.*— (1) This rule shall apply to, —

(a) an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in Part I of Schedule I and is listed in Column 2 of Part II of this Schedule is or may be involved; and

(b) isolated storage in which there is involved a threshold quantity of a hazardous chemical listed in Schedule 2 in Column 2 which is equal to or more than the threshold quantity specified in the Schedule for that chemical in Column 3 thereof.

(2) An occupier who has control of an industrial activity in terms of sub-rule (1) shall provide evidence to show that he has, —

(a) identified the major accident hazards; and

(b) taken adequate steps to —

(i) prevent such major accidents and to limit their consequences to persons and the environment;

(ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.

5. *Notification of Major accident.*— (1) Where a major accident occurs on a site, the occupier shall forthwith notify the concerned authority as identified in Schedule 5 of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in instalments, if necessary, in Schedule 6.

(2) The concerned authority shall on receipt of the report in accordance with sub-rule 1 of this rule, shall undertake a full analysis of the major accident and send the requisite information to the Ministry of Environment and Forests through appropriate channel.

(3) Where an occupier has notified a major accident to the concerned authority under respective legislation, he shall be deemed to have complied with the requirements as per sub-rule 1 of this rule.

6. *Industrial activity to which rules 7 to 15 apply.*—

(1) Rules 7 to 15 shall apply to, —

(a) an industrial activity in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in Columns 3 & 4 (Rules 10-12 only for Column 4) and

(b) isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in Column 4.

(2) For the purposes of rules 7 to 15, —

(a) "new industrial activity" means an industrial activity which —

(i) commences after the date of coming into operation of these rules; or

(ii) if commenced before that date, is an industrial activity in which a modification has been made which is likely to cover major accident

hazards, and that activity shall be deemed to have commenced on the date on which the modification was made;

- (b) an "existing industrial activity" means an industrial activity which is not a new industrial activity.

7. *Notification of sites.* — (1) An occupier shall not undertake any industrial activity unless he has submitted a written report to the concerned authority containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the concerned authority may agree and for the purposes of this paragraph, an activity in which subsequently there is or is liable to be a threshold quantity or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly.

(2) No report under sub-rule (1) need to be submitted by the occupier if he submits a report under rule 10(1).

8. *Updating of the site notification following changes in the threshold quantity.* — Where an activity has been reported in accordance with rule 7(1) and the occupier makes a change in it (including an increase or decrease in the maximum threshold quantity of a hazardous chemical to which this rule applies which is or is liable to be at the site or in the pipeline or at the cessation of the activity) which affects the particulars specified in that report or any subsequent report made under this rule. The occupier shall forthwith furnish a further report to the concerned authority.

9. *Transitional provisions.* — Where, —

- (a) at the date of coming into operation of these rules, an occupier is in control of an existing industrial activity which is required to be reported under rule 7(1); or
- (b) within 6 months after that date an occupier commences any such new industrial activity;

it shall be a sufficient compliance with that rule if he reports to the concerned authority as per the particulars in Schedule 7 within 3 months after the date of coming into operation of these rules or within such longer time as the concerned authority may agree in writing.

10. *Safety reports.* — (1) Subject to the following paragraphs of this rule, an occupier shall not undertake any industrial activity to which this rule applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to that concerned authority at least ninety days before commencing that activity.

(2) In the case of a new industrial activity which an occupier commences or by virtue of sub-rule (2) (a) (ii) of rule 6 is deemed to commence, within 6 months after coming into operation of these rules, it shall be a sufficient compliance with sub-rule (1) of this rule if the occupier sends to the concerned

authority a copy of the report required in accordance with that sub-rule within ninety days after the date of coming into operation of these rules.

(3) In the case of an existing industrial activity, until five years from the date of coming into operation of these rules, it shall be a sufficient compliance with sub-rule (1) of this rule if the occupier on or before ninety days from the date of the coming into operation of these rules sends to the concerned authority the information specified in Schedule 7 relating to that activity.

11. *Updating of reports under Rule 10.* — (1) Where an occupier has made a safety report in accordance with sub-rule (1) of rule 10 he shall not make any modification to the industrial activity to which that safety report relates which could materially affect the particulars in that report, unless he has made a further report to take account of those modifications and has sent a copy of that report to the concerned authority at least 90 days before making those modifications.

(2) Where an occupier has made a report in accordance with rule 10 and sub-rule (1) of this rule and that industrial activity is continuing, the occupier shall within three years of the date of the last such report, make a further report which shall have regard in particular to new technical knowledge which has affected the particulars in the previous report relating to safety and hazard assessment, and shall within 30 days or in such longer time as the concerned authority may agree in writing, send a copy of the report to the concerned authority.

12. *Requirements for further information to be sent to the authority.* — (1) Where, in accordance with rule 10, an occupier has sent a safety report relating to an industrial activity to the concerned authority, the concerned authority may, by a notice served on the occupier, requires him to provide such additional information as is specified in the notice and the occupier shall send that information to the concerned authority within such time as is specified in the notice or within such extended time as the authority may subsequently specify.

13. *Preparation of on-site emergency plan by the occupier.* — (1) An occupier shall prepare and keep up-to-date an on-site emergency plan detailing how major accidents will be dealt with on the site on which the industrial activity is carried on and that plan shall include the name of the person who is responsible for safety on the site and the names of those who are authorised to take action in accordance with the plan in case of an emergency.

(2) The occupier shall ensure that the emergency plan prepared in accordance with sub-rule (1), takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan is informed of its relevant provisions.

(3) The occupier shall prepare the emergency plan required under sub-rule (1), —

- (a) in the case of a new industrial activity, before that activity is commenced;
- (b) in the case of an existing industrial activity within 90 days of coming into operation of these rules.

14. *Preparation of off-site emergency plans by the authority.* — (1) It shall be the duty of the concerned authority as identified in Column 2 of Schedule 5 to prepare and keep up-to-date an adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the concerned authority shall consult the occupier, and such other persons as it may deem necessary.

(2) For the purpose of enabling the concerned authority to prepare the emergency plan required under sub-rule (1), the occupier shall provide the concerned authority with such information relating to the industrial activity under his control as the concerned authority may require, including the nature, extent and likely effects off-site of possible major accidents and the authority shall provide the occupier with any information from the off-site emergency plan which relates to his duties under rule 13.

(3) The concerned authority shall prepare its emergency plan required under sub-rule (1) —

- (a) in the case of a new industrial activity, before that activity is commenced;
- (b) in the case of an existing industrial activity, within six months of coming into operation of these rules.

15. *Information to be given to persons liable to be affected by a major accident.* — (1) The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about —

- (a) the nature of the major accident hazard; and
- (b) the safety measures and the 'Dos' and 'Donts' which should be adopted in the event of a major accident.

(2) The occupier shall take the steps required under sub-rule (1) to inform persons about an industrial activity, before that activity is commenced, except, in the case of an existing industrial activity in which case the occupier shall comply with the requirements of sub-rule (1) within 90 days of coming into operation of these rules.

16. *Disclosures of information.* — (1) Where for the purpose of evaluating information notified under rule 5 or 7 to 15, the concerned authority discloses that information to some other person, that other person shall not use that information for any purpose except for the purpose of the concerned authority disclosing it, and before disclosing the information the concerned authority shall inform that other person of his obligations under this paragraph.

17. *Collection, Development and Dissemination of Information.* — (1) This rule shall apply to an industrial activity in which a hazardous chemical which satisfies any of the criteria laid down in part I of Schedule 1 and is listed in Column 2 of Part II of this Schedule is or may be involved.

(2) An occupier, who has control of an industrial activity in term of sub-rule (1) of this rule, shall arrange to obtain or develop information in the form of safety data sheet as specified in Schedule 9. The information shall be accessible upon request for reference.

(3) The occupier while obtaining or developing a safety data sheet as specified in Schedule 9 in respect of a hazardous chemical handled by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemical is available, it shall be added to the material safety data sheet as specified in Schedule 9 as soon as practicable.

(4) Every container of a hazardous chemical shall be clearly labelled or marked to identify, —

- (a) the contents of the container;
- (b) the name and address of the manufacturer or importer of the hazardous chemical;
- (c) the physical, chemical and toxicological data per the criteria given at Part I of Schedule 1.

(5) In terms of sub-rule 4 of this rule where it is impractical to label a chemical in view of the size of the container or the nature of the package, provision should be made for other effective means like tagging or accompanying documents.

18. *Import of hazardous chemicals.* — (1) This rule shall apply to a chemical which satisfies any of the criteria laid down in Part I of Schedule 1 and is listed in Column 2 of Part II of this Schedule.

(2) Any person responsible for importing hazardous chemicals in India shall provide at the time of import or within thirty days from the date of import to the concerned authorities as identified in Column 2 of Schedule 5 the information pertaining to —

- (i) the name and address of the person receiving the consignment in India;
- (ii) the port of entry in India;
- (iii) mode of transport from the exporting country to India;
- (iv) the quantity of chemical(s) being imported; and
- (v) complete product safety information.

(3) If the concerned authority at the State is satisfied that the chemical being imported is likely to cause major accident, it may direct the importer to take such steps including stoppage of such imports as the concerned authority at the State may deem it appropriate.

(4) The concerned authority at the State shall simultaneously inform the concerned Port Authority to take appropriate steps regarding safe handling and storage of hazardous chemicals while off-loading the consignment within the port premises.

(5) Any person importing hazardous chemicals shall maintain the records of the hazardous chemicals imported as specified in Schedule 10 and the

records so maintained shall be open for inspection by the concerned authority at the State or the Ministry of Environment and Forests or any officer appointed by them in this behalf.

(6) The importer of the hazardous chemical or a person working on his behalf shall ensure that transport of hazardous chemicals from port of entry to the ultimate destination is in accordance with the Central Motor Vehicles Rules, 1989 framed under the provisions of the Motor Vehicles Act, 1988.

19. *Improvement notices.*—(1) If the concerned authority is of the opinion that a person has contravened the provisions of these rules, the concerned authority shall serve on him a notice (in this para referred to as "an improvement notice") requiring that person to remedy the contravention or, as the case may be, the matters occasioning it within such period as may be specified in the notice.

(2) A notice served under sub-rule (1) shall clearly specify the measures to be taken by the occupier in remedying said contraventions.

20. *Power of the Central Government to modify the Schedules.*—The Central Government may, at any time, by notification in the Official Gazette, make suitable changes in the Schedules.

SCHEDULE I

[See rule 2(e) (i), 4(1) (a), 4(2) (i), 17 and 18].

Indicative Criteria and List of Chemicals

PART 1

(a) Toxic Chemicals:

Chemicals having the following values of acute toxicity and which, owing to their physical and chemical properties, are capable of producing major accident hazards.

Sl. No.	Degree of Toxicity	Medium lethal dose by the oral route (oral toxicity) LD 50 (mg/kg body weight of test animals)	Medium lethal dose by the dermal route (dermal toxicity) LD 50 (mg/kg body weight of test animals)	Medium lethal concentration by inhalation route (four hours) LC 50 (mg/l inhalation in test animals)
1.	Extremely toxic	1—50	1—200	0.1—0.5
2.	Highly toxic	51—500	201—2000	0.5—2.0

(b) Flammable chemicals:

(a) flammable gases: chemicals which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below;

(ii) highly flammable liquids: chemicals which have a flash point lower than 23°C and the boiling point of which at normal pressure is above 20°C;

(iii) flammable liquids: chemicals which have a flash point lower than 65°C and which remain liquids under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.

(c) Explosives:

Chemicals which may explode under the effect of flame, heat or photo-chemical conditions or which are more sensitive to shocks or friction than dinitrobenzene.

PART II

List of Hazardous and Toxic Chemicals

Sl. No.	Name of the Chemical
1	2
1.	Acetone
2.	Acetone Cyanohydrine
3.	Acetyl Chloride
4.	Acetylene (Ethyne)
5.	Acrolein (2-Propenal)
6.	Acrylonitrile
7.	Aldicarb
8.	Aldrin
9.	Alkyl Phthalate
10.	Allyl Alcohol
11.	Allylamine
12.	Alpha Naphthyl Thiourea (Antu)
13.	Aminodiphenyl, -4
14.	Aminophenol - 2
15.	Amiton
16.	Ammonia
17.	Ammonium Nitrate
18.	Ammonium Nitrates in fertilizers
19.	Ammonium Sulfamate
20.	Anabasine
21.	Aniline
22.	Anisidine-p
23.	Antimony and Compounds
24.	Antimony Hydride (Stibine)
25.	Arsenic Hydride (Arsine)
26.	Arsenic Pentoxide, (Arsenic) (v) Acide and Salts
27.	Arsenic Trioxide, Arsenious (iii) Acids and Salts
28.	Asbestos
29.	Azinphos-Ethyl
30.	Azinphos-Methyl
31.	Barium Azide
32.	Benzene
33.	Benzidine
34.	Benzidine Salts
35.	Benzoquinone
36.	Benzoyl Chloride
37.	Benzoyl Peroxide
38.	Benzyl Chloride
39.	Benzyl Cyanide
40.	Beryllium (Powders, Compounds)
41.	Biphenyl
42.	Bis (2-Chloromethyl) Ketone
43.	Bis (2, 4, 6-Trinitrophenyl) Amine
44.	Bis (2-Chloroethyl) Sulphide
45.	Bis (Chloromethyl) Ether
46.	Bis (tert-Butylperoxy) Butane, 2, 2
47.	Bis (tert-Butylperoxy) Cyclohexane, 1, 1

48. Bis -, 2 TRIBROMOPHENOXY-Ethane
49. Bisphenol
50. Boron and Compounds
51. Bromine
52. Bromine Pentafluoride
53. Bromoform
54. Butadiene-1,3
55. Butane
56. Butanethiol
57. Butanone-2
58. Butoxy Ethanol
59. Butyl Glycidal Ether
60. Butyl Peroxyacetate, tert
61. Butyl Peroxyisobutyrate, tert
62. Butyl Peroxyisopropyl Carbonate tert
63. Butyl Peroxymaleate, tert
64. Butyl Peroxypivalate, tert
65. Butyl Vinyl Ether
66. Butyl-n-Mercaptan
67. Butylamine
68. C 9-Aromatic Hydrocarbon Fraction
69. Cadmium and Compounds
70. Cadmium Oxide (fumes)
71. Calcium Cyanide
72. Captan
73. Captofol
74. Carbaryl (Sevin)
75. Carbofuran
76. Carbon Disulphide
77. Carbon Monoxide
78. Carbon Tetrachloride
79. Carbophenothion
80. Cellulose Nitrate
81. Chlorates (used in explosives)
82. Chlordane
83. Chlorfenvinphos
84. Chlorinated Benzenes
85. Chlorine
86. Chlorine Di Oxide
87. Chlorine Oxide
88. Chlorine Trifluoride
89. Chlormequat Chloride
90. Chloroacetalchloride
91. Chloroacetaldehyde
92. Chloroaniline, -2
93. Chloroaniline, -4
94. Chloropenzene
95. Chlorodiphenyl
96. Chloroepoxypropane
97. Chloroethanol
98. Chloroethyl Chloroformate
99. Chlorofluorocarbons
100. Chloroform
101. Chloroformyl-4, Morpholine
102. Chloromethane
103. Chloromethyl Ether
104. Chloromethyl Methyl Ether
105. Chloronitrobenzene
106. Chloroprene
107. Chlorosulphonic Acid
108. Chlorotrinitrobenzene
109. Chloroxuron
110. Chromium and Compounds
111. Cobalt and Compounds
112. Copper and Compounds
113. Coumafuryl
114. Coumaphos
115. Coumatetralyl
116. Cresols
117. Crimidine
118. Cumene
119. Cyanophos
120. Cyanothoate
121. Cyanuric Fluoride
122. Cyclohexane
123. Cyclohexanol
124. Cyclohexanone
125. Cycloheximide
126. Cyclopentadiene
127. Cyclopentane
128. Cyclotetramethylenetetranitramine
129. Cyclotrimethylene Trinitramine
130. DDT
131. Decabromodiphenyl Oxide
132. Demeton
133. Di-Isobutyl Peroxide
134. Din-Propyl Peroxydicarbonate
135. Di-sec-Butyl Peroxydicarbonate
136. Dialifos
137. Diazodinitrophenol
138. Diazomethane
139. Dibenzyl Peroxydicarbonate
140. Dichloroacetylene
141. Dichlorobenzene-o
142. Dichlorobenzene-p
143. Dichloroethane
144. Dichloroethyl Ether
145. Dichlorophenol, 2, 4
146. Dichlorophenol, -2, 6
147. Dichlorophenoxy Acetic Acid, -2, 4 (2, 4-D)
148. Dichloropropane, -1, 2
149. Dichlorosalicylic Acid, -3, 5
150. Dichlorvos (DDVP)
151. Dicrotophos
152. Dieldrin
153. Diepoxybutane
154. Diethyl Peroxydicarbonate
155. Diethylene Glycol Dintrate
156. Diethylene Triamine
157. Diethyleneglycol Butyl Ether/Diethyleneglycol Butyl Acetate
158. Diethylenetriamine (DETA)
159. Diglycidyl Ether
160. Dihydroperoxypropane, -2, 2
161. Diisobutyryl Peroxide
162. Dimefox
163. Dimethoate
164. Dimethyl Phosphoramidocyanidic Acid
165. Dimethyl Phthalate
166. Dimethylcarbonyl
167. Dimethylnitrosamine
168. Dinitrophenol, Salts
169. Dinitrotoluene
170. Dintro-o-Cresol
171. Dioxane
172. Dioxathion
173. Dioxolane
174. Diphacinone
175. Diphosphoramidate Octamethyl
176. Dipropylene Glycolmethylether
177. Disulfoton
178. Endosulfan
179. Endrin
180. Epichlorohydrine
181. EPN
182. Epoxypropane, 1, 2
183. Ethion
184. Ethyl Carbamate
185. Ethyl Ether
186. Ethyl Hexanol, -2
187. Ethyl Mercaptan

188. Ethyl Methacrylate
189. Ethyl Nitrate
190. Ethylamine
191. Ethylene
192. Ethylene Chlorohydrine
193. Ethylene Diamine
194. Ethylene Dibromide
195. Ethylene Diclride
196. Ethylene Glycol Dinitrate
197. Ethylene Oxide
198. Ethyleneimine
199. Ethylthiocynate
200. Fensulphothion
201. Fluenetil
202. Fluoro, -4, -2-Hydroxybutyric Acid and Salts, Esters, Amides
203. Fluoroacetic Acid and Salts, Esters, Amides
204. Fluorobutyric Acid, -4, and Salts, Esters, Amides
205. Fluorocrotonic Acid, -4, and Salts, Esters, Amides
206. Formaldehyde
207. Glyconitrile (Hydroxyacetoneitrile)
208. Guanyl, -1, -4-Nitrosaminoguanyl-1-Tetrazene
209. Heptachlor
210. Hexachloro Cyclopentadiene
211. Hexachlorocyclohexane
212. Hexachlorocycloamethane
213. Hexachlorodibenzo-p-Dioxin, -1, 2, 3, 7, 8, 9
214. Hexafluoropropene
215. Hexamethylphosphoramide
216. Hexamethyl, -3, 3, 6, 9, 9, -1, 2, 4, 5-Texproxa-cyclononane
217. Hexamethylenediamine
218. Hexane
219. Hexanitrostilbene, -2, 2, 4, 4, 6, 6
220. Hexavalent Chromium
221. Hydrazine
222. Hydrazine Nitrate
223. Hydrochloric Acid
224. Hydrogen
225. Hydrogen Bromide (Hydrobromic Acid)
226. Hydrogen Chloride (Liquified Gas)
227. Hydrogen Cyanide
228. Hydrogen Fluoride
229. Hydrogen Selenide
230. Hydrogen Sulphide
231. Hydroquinone
232. Iodine
233. Isobenzan
234. Isodrin
235. Isophorone Diisocyanate
236. Isopropyl Ether
237. Juglone (5-Hydroxynaphthalene-1, 4-Dione)
238. Lead (inorganic fumes & dusts)
239. Lead 2, 4, 6-Trinitroresorcinoxide (Lead Styphnate)
240. Lead Azide
241. Leptophos
242. Lindane
243. Liquified Petroleum Gas (LPG)
244. Maleic Anhydride
245. Manganese & Compounds
246. Mercapto Benzothiazole
247. Mercury Alkyl
248. Mercury Fulminate
249. Mercury Methyl
250. Methacrylic Anhydride
251. Methacrylonitrile
252. Methacryloyl Chloride
253. Methamidophos
254. Methanesulphonyl Fluoride
255. Methanethiol
256. Methoxy Ethanol (2-Methyl Cellosolve)
257. Methoxyethylmercuric Acetate
258. Methyl Acrylate
259. Methyl Alcohol
260. Methyl Amylketone
261. Methyl Bromide (Bromomethane)
262. Methyl Chloride
263. Methyl Chloroform
264. Methyl Cyclohexene
265. Methyl Ethyl Ketone Peroxide
266. Methyl Hydrazine
267. Methyl Isobutyl Ketone
268. Methyl Isobutyl Ketone Peroxide
269. Methyl Isocyanate
270. Methyl Isothiocyanate
271. Methyl Mercaptan
272. Methyl Methacrylate
273. Methyl Parathion
274. Methyl Phosphonic Dichloride
275. Methyl-N, 2, 4, 6-Tetranitroaniline
276. Methylene Chloride
277. Methylenebis, -4, 4, (2-Chloroaniline)
278. Methyltrichlorosilane
279. Mevinphos
280. Molybdenum & Compounds
281. N-Methyl-N, 2, 4, 6-N-Tetranitroaniline
282. Naphtha (Coal Tar)
283. Naphthylamine, 2
284. Nickel & Compounds
285. Nickel Tetracarbonyl
286. Nitroaniline-O
287. Nitroaniline-P
288. Nitrobenzene
289. Nitrochlorobenzene-P
290. Nitrocyclohexane
291. Nitroethane
292. Nitrogen Dioxide
293. Nitrogen Oxides
294. Nitrogen Trifluoride
295. Nitroglycerine
296. Nitrophenol-P
297. Nitropropane-1
298. Nitropropane-2
299. Nitrosodimethylamine
300. Nitrotoluene
301. Octabromophenyl Oxide
302. Oleum
303. Oleylamine
304. OO-Diethyl S-Ethylsulphonylmethyl
305. OO-Diethyl S-Ethylsulphonylmethyl Phosphorothioate
306. OO-Diethyl S-Ethylthiomethyl Phosphorothioate
307. OO-Diethyl S-Isopropylthiomethyl Phosphorodithioate
308. OO-Diethyl S-Propylthiomethyl Phosphorodithioate

309. Oxyamyl
310. Oxydisulfoton
311. Oxygen (Liquid)
312. Oxygen Difluoride
313. Ozóne
314. Paroxon (Diethyl 4-Nitrophenyl Phosphate)
315. Paraquat
316. Parathion
317. Parathion Methyl
318. Paris green (Bis Aceto Hexametaarsenito Tetracopper)
319. Pentaborane
320. Pentabromodiphenyl Oxide
321. Pentabromophenol
322. Pentachloro Naphthalene
323. Pentachloroethane
324. Pentachlorophenol
325. Pentaerythritol Tetranitrate
326. Pentane
327. Peracetic Acid
328. Perchloroethylene
329. Perchloromethyl Mercaptan
330. Petanone, 2. 4-Methyl
331. Phenol
332. Phenyl Glycidal Ether
333. Phenylene p-Diamine
334. Phenylmercury Acetate
335. Phorate
336. Phosacetim
337. Phosalone
338. Phosfolan
339. Phosgene (Carbonyl Chloride)
340. Phosmet
341. Phosphamidon
342. Phosphine (Hydrogen Phosphide)
343. Phosphoric Acid and Esters
344. Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethylpropyl) Bromoethyl Ester
345. Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethylpropyl) Chloroethyl Ester
346. Bosphoric Acid. Chloroethyl Bromo (2, 2-Dimethoxylpropyl) Chloroethylester
347. Phosphorous & Compounds
348. Phostalan
349. Picric Acid (2, 4, 6-Trinitrophenol)
350. Polybrominated Biphenyls
351. Potassium Arsenite
352. Potassim Chlorate
353. Promurit (1-(3, 4-Dichlorophenyl)-3-Triazene-thiocarboxamide)
354. Propaneshultone-1, 3
355. Propen,-1,-2-Chloro-1,3-Diol-Diacetate
356. Propylene Dichloride
357. Propylene Oxide
358. Propyleneimine
359. Pyrazoxon
360. Selenium Hexafluoride
361. Semicarbazide Hydrochloride
362. Sodium Arsenite
363. Sodium Azide
364. Sodium Chlorate
365. Sodium Cyanide
366. Sodium Picramate
367. Sodium Selenite
368. Styrene, 1, 1, 2, 2-Tetrachloroethane
369. Sulfotep
370. Sulphur Dichloride
371. Sulphur Dioxide
372. Sulphur Trioxide
373. Sulphuric Acid
374. Sulphoxide, 3-Chloropropylactyl
375. Tellurium
376. Tellurium Hexafluoride
377. Tepp
378. Terbufos
379. Tetrapromobisphenol-A
380. Tetrachloro, 2, 2, 5, 6, 2, 5-Cyclohexadiene-1, 4-Dione
381. Tetrachlorodibenzo-p-Dioxin, 2, 3, 7, 8 (TCDD)
382. Tetraethyl Lead
383. Tetrafluoroethane
384. Tetramethylenedisulphotetramine
385. Tetramethyl Lead
386. Tertanitromethane
387. Thallium & Compounds
388. Thionazin
389. Thionyl Chloride
390. Tirpate
391. Toluene
392. Toluene-2-4-Diisocyanate
393. Toluidine-O
394. Toluene 2,6-Diisocyanate
395. Trans-1, 4-Chlorobutene
396. Tri, -1 (Cyclohexyl) Stannyl-1H-1, 2, 4-Trazole
397. Triamino, -1, 3, 5, 2, 4, 6-Trintrozenzene
398. Tribromophenol, 2, 4, 6
399. Trichloro Acetyl Chloride
400. Trichloro Ethane
- 401 Trichloro Napthalene
402. Trichloro (chloromethyl) Silane
403. Trichlorodichlorophenylsilane
404. Trichloroethane, 1, 1, 1
405. Trichloroethyl Silane
406. Trichloroethylene
407. Trichloromethanesulphenyl Chloride
408. Trichlorophenol, 2, 2, 6
409. Trichlorophenol, 2, 4, 5
410. Triethylamine
411. Triethylenemelamine
412. Trimethyl Chlorosilane
413. Trimethylolpropane Phosphite
414. Trinitroaniline
415. Trinitroanisole, 2, 24, 6
416. Trinitrobenzene
417. Trinitrobenzoic Acid
418. Trinitrocresol
419. Trinitrophenetole, 2, 4, 6
420. Trinitroresorcinol, 2, 4, 6 (Styphnic Acid)
421. Trinitrotoluene
422. Triorthocresyl Phosphate
423. Triphenyltin Chloride
424. Turpentine
425. Uranium & Compounds
426. Vanadium & Compounds
427. Vinyl Chloride
428. Vinyl Fluoride
429. Vinyl Toluene
430. Warfarin
431. Xylene
432. Xylidine
433. Zinc & Compounds
434. Zorconium & Compounds

SCHEDULE 2

[See rule 2(e) (ii), 4(1) (b), 4(2) (1) and 6(1) (b)]

Isolated Storage at Installations other than those covered by Schedule 4.

(a) The threshold quantities set out below relate to each installation or group of installations belonging to the same occupier where the distance between installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These threshold quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 metres.

(b) For the purpose of determining the threshold quantity of a hazardous chemical at an isolated storage, account shall also be taken of any hazardous chemical which is:—

- (i) in that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres of that site and connected to it;
- (ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and
- (iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

Sl. No.	Chemicals	Threshold Quantities (tonnes)	
		For application of Rules, 4, 5 and 7-9.	For application of Rules 10 to 15
1.	2.	3.	4.
1.	Acrylonitrile	350	5,000
2.	Ammonia	60	600
3.	Ammonium nitrate (a)	350	2,500
4.	Ammonium nitrate fertilizers (b)	1,250	10,000
5.	Chlorine	10	25
6.	Flammable gases as defined in Schedule I, paragraph (b) (i)	50	300
7.	Highly flammable liquids as defined in Schedule 1, paragraph (b) (ii)	10,000	10,000
8.	Liquid oxygen	200	2,000
9.	Sodium chlorate	25	250
10.	Sulphur dioxide	20	500
11.	Sulphur trioxide	15	100

(a) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90 per cent by weight.

(b) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight (a compound-fertilizer contains ammonium nitrate together with phosphate and/or potash).

SCHEDULE 3

[See rule 2(e) (iii), 5 and 6(1) (a)]

List of Hazardous Chemicals for Application of Rules 5 and 7 to 15.

(a) The quantities set-out-below relate to each installation or group of installations belonging to the same occupier where the distance between the installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major-accident hazards. These quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 metres.

(b) For the purpose of determining the threshold quantity of a hazardous chemical in an industrial installation, account shall also be taken of any hazardous chemicals which is:—

- (i) in that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres off that site and connected to it;

(ii) at any other site under the control of the same occupier any part the boundary of which is within 500 metres the said site; and

(iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

PART I

Named Chemicals

Sl. No.	Chemical	Threshold Quantity		CAS Number
		for application of Rules 5, 7-9 and 13-15	for application of Rules 10-12	
1.	2.	3.	4.	5.
GROUP 1-TOXIC SUBSTANCES				
1.	Aldicarb	100 kg		116-06-3
2.	4-Aminodiphenyl	1 kg		96-67-1
3.	Amiton	1 kg		78-53-5
4.	Anabasine	100 kg		494-52-0
5.	Arsenic pentoxide, Arsenic (V) acid & salts	500 kg		
6.	Arsenic trioxide, Arsenious (III) acid & salts	100 kg		
7.	Arsine (Arsenic hydride)	10 kg		7784-42-1
8.	Azinphos-ethyl	100 kg		2642-71-9
9.	Azinphos-methyl	100 kg		86-50-0
10.	Bezidine	1 kg		92-87-5
11.	Bezidine salts	1 kg		
12.	Beryllium (powders compounds)	10 kg		
13.	Bis (2-chloroethyl) sulphide	1 kg		505-60-2
14.	Bis chloromethyl ether	1 kg		542-88-1
15.	Carbofuran	100 kg		1563-66-2
16.	Carbophenothion	100 kg		786-19-6
17.	Chlorfenvinphos	100 kg		470-90-6
18.	4-(Chloroformyl) morpholine	1 kg		15159-40-7
19.	Chloromethyl methyl ether	1 kg		107-30-2
20.	Cobalt (metal, oxides, carbonates, sulphides, as powders)	1 t		
21.	Crimidine	100 kg		535-89-7
22.	Cyanthoate	100 kg		3734-95-0
23.	Cycloheximide	100 kg		66-81-9
24.	Demeton	100 kg		8065-48-3
25.	Dialifos	100 kg		10311-84-9
26.	OO-Diethyl S-ethylsulphinylmethyl phosphorothioate	100 kg		2588-05-8
27.	OO-Diethyl S-ethylsulphonylmethyl phosphorothioate	100 kg		2588-06-9
28.	OO-Diethyl S-ethylthiomethyl phosphorothioate	100 kg		2600-69-3
29.	OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100 kg		78-52-1
30.	OO-Diethyl S-propylthiomethyl phosphorodithioate	100 kg		3309-68-0
31.	Dimetox	100 kg		115-26-4
32.	Dimethylcarbamoyl chloride	1 kg		79-44-7
33.	Dimethylnitrosamine	1 kg		62-75-9
34.	Dimethyl phosphoramidocyanidic acid	1 t		63917-41-9
35.	Diphacinone	100 kg		82-66-6
36.	Disulfoton	100 kg		298-04-4
37.	EPN	100 kg		2104-64-5
38.	Ethion	100 kg		563-12-2
39.	Fensulfothion	100 kg		115-90-2
40.	Flunetil	100 kg		4301-50-2
41.	Fluoroacetic acid	1 kg		144-49-0
42.	Fluoroacetic acid, salts	1 kg		
43.	Fluoroacetic acid esters	1 kg		
44.	Fluoroacetic acid, amides	1 kg		
45.	4-Fluorobutyric acid	1 kg		
46.	4-Fluorobutyric acid, salts	1 kg		
47.	4-Fluorobutyric acid esters	1 kg		
48.	4-Fluorobutyric acid, amides	1 kg		
49.	4-Fluorocrotonic acid	1 kg		
50.	4-Fluorocrotonic acid salts	1 kg		
51.	4-Fluorocrotonic acid esters	1 kg		
52.	4-Fluorocrotonic acid, amides	1 kg		
53.	4-Fluoro-2-hydroxybutyric acid	1 kg		

1.	2.	3.	4.	5.
54.	4-Fluoro-2-hydroxybutyric acid, salts	1 kg		
55.	4-Fluoro-2-hydroxybutyric acid, esters	1 kg		
56.	4-Fluoro-hydroxybutyric acid, amides	1 kg		
57.	Glycolonitrile (Hydroxyacetonitrile)	100 kg		107-16-4
58.	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	100 kg		19408-74-3
59.	Hexamethylphosphoramide	1 kg		680-31-9
60.	Hydrogen selenide	10 kg		7783-07-5
61.	Isobenzan	100 kg		297-78-9
62.	Isodrin	100 kg		465-73-6
63.	Juglone (5-Hydroxynaphthalene 1, 4-dione)	100 kg		481-39-0
64.	4,4'-Methylenebis (2-chloroaniline)	10 kg		101-14-4
65.	Methyl isocyanate	150 kg	150 kg.	624-83-9
66.	Mevinphos	100 kg		7786-34-7
67.	2-Naphthylamine	1 kg		91-59-8
68.	Nickel (metal, oxides, carbonates, sulphide, as powders)	1 t		
69.	Nickel tetracarbonyl	10 kg		13463
70.	Oxydisulfoton	100 kg		2497-07-6
71.	Oxygen difluoride	10 kg		7783-41-7
72.	Paraoxon (Diethyl 4-nitrophenyl phosphate)	100 kg		311-45-5
73.	Parathion	100 kg		56-38-2
74.	Parathion-methyl	100 kg		298-00-0
75.	Pentaborane	100 kg		19624-22-7
76.	Phorate	100 kg		298-02-2
77.	Phosacetim	100 kg		4104-14-7
78.	Phosgene (carbonyl chloride)	750 kg	750 kg.	75-44-5
79.	Phosphamidon	100 kg		13171-21-6
80.	Phosphine (Hydrogen phosphide)	100 kg		7803-51-2
81.	Promurit (1-(3, 4-Dichlorophenyl)-3-triazene-thiocarboxamide)	100 kg		5836-73-7
82.	1, 3-Propanesultone	1 kg		1120-71-4
83.	1-Propen-2-chloro-1, 3-diol diacetate	10 kg		10118-72-6
84.	Pyrazoxon	100 kg		108-34-9
85.	Selenium hexafluoride	10 kg		7783-79-1
86.	Sodium selenite	100 kg		10102-18-8
87.	Stibine (Antimony hydride)	100 kg		7803-52-3
88.	Sulfotep	100 kg		3689-24-5
89.	Sulphur dichloride	1 t		10545-99-00
90.	Tellurium hexafluoride	100 kg		7783-80-4
91.	TEPP	100 kg		107-49-3
92.	2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin (TCDD)	1 kg		1746-01-6
93.	Tetramethylenedisulphotetramine	1 kg		80-12-6
94.	Thionazin	100 kg		297-97-2
95.	Tirpate (2,4-Dimethyl-1, 3-dithiolane-2-carboxaldehyde O-methylcarbamoyloxime)	100 kg		26419-73-8
96.	Trichloromethanesulphenyl chloride	100 kg		594-42-3
97.	1-Tri(cyclohexyl) stannyl-1H-1, 2, 4-triazole	100 kg		41083-11-8
98.	Triethylenemelamine	10 kg		51-18-3
99.	Warfarin	100 kg		81-81-2
GROUP 2-TOXIC SUBSTANCES				
100.	Acetone cyanohydrin (2-Cyanopropan-2-ol)	200 t		75-86-5
101.	Acrolein (2-Propenal)	20 t		107-02-8
102.	Acrylonitrile	20 t	200 t	107-13-1
103.	Allyl alcohol (Propen-1-ol)	200 t		107-18-6
104.	Allylamine	200 t		107-11-9
105.	Ammonia	50 t	500 t	7664-41-7
106.	Bromine	40 t		7726-95-6
107.	Carbon disulphide	20 t	200 t	75-15-0
108.	Chlorine	10 t	25 t	7782-50-5
109.	Diphenyl methane di-isocyanate (MDI)	20 t		101-68-8
110.	Ethylene dibromide (1, 2-Dibromoethane)	5 t		106-93-4
111.	Ethyleneimine	50 t		151-56-4
112.	Formaldehyde (concentration \leq 90%)	5 t		50-00-0
113.	Hydrogen chloride (liquified gas)	25 t	250 t	7647-01-0
114.	Hydrogen cyanide	5 t	20 t	74-90-8

1.	2.	3.	4.	5.
115.	Hydrogen fluoride	5 t	50 t	7664-39-3
116.	Hydrogen sulphide	5 t	50 t	7783-06-4
117.	Methyl bromide (Bromomethane)	20 t		74-83-9
118.	Nitrogen oxides	50 t		11104-93-1
119.	Propyleneimine	50 t		75-55-8
120.	Sulphur dioxide	20 t	250 t	7446-09-5
121.	Sulphur trioxide	15 t	75 t	7446-11-9
122.	Tetraethyl lead	5 t		78-00-2
123.	Tetramethyl lead	5 t		75-74-1
124.	Toluene di-isocyanate (TDI)	10 t		584-84-9
				75,01-4

GROUP 3 — HIGHLY REACTIVE SUBSTANCES

125.	Acetylene (ethyne)	5 t		74-86-2
126.	a. Ammonium nitrate (1)	350 t	2 500 t	6484-52-2
	b. Ammonium nitrate in form of fertiliser (2)	1 250 t		
127.	2, 2-Bis (tert-butylperoxy) butane (concentration $\geq 70\%$)	5 t		2167-23-9
128.	1,1-Bis (tert-butylperoxy) cyclohexane (concentration $\geq 80\%$)	5 t		3006-86-8
		5 t		3006-86-8
129.	tert-Butyl prexyacetate (concentration $\leq 70\%$)	5 t		107-71-1
130.	tert-Butyl peroxyisobutyrate (concentration $\geq 80\%$)	5 t		109-13-7
131.	tert-Butyl peroxy isopropyl carbonate (concentration — $\geq 80\%$)	5 t		2372-21-6
132.	tert-Butyl peroxy maleate (concentration $\leq 80\%$)	5 t		1931-2-0
133.	tert-Butyl peroxy pivalate (concentration $\leq 77\%$)	50 t		927-07-1
134.	Dibenzyl peroxydicarbonate (concentration $\leq 90\%$)	5 t		2144-45-8
135.	Di-sec-Butyl peroxydicarbonate (concentration $\geq 80\%$)	5 t		19910-5-0
136.	Diethyl peroxydicarbonate (concentration 30%)	50 t		14666-78-5
137.	2, 2-Dihydroperoxypropane (concentration $\leq 30\%$)	5 t		2614-76-8
138.	Di-isobutyl peroxide (Concentration 50%)	50 t		3437-84-1
139.	Di-n-propyl peroxydicarbonate (concentration — 80%)	5 t		16066-38-9
140.	Ethylene oxide	5 t	50 t	75-21-8
141.	Ethyl nitrate	50 t		625-58-1
142.	3, 3, 6, 6, 9, 9-Hexamethyl-1,2,4,5-tetrooxacyclononane (concentration — 75%)	50 t		22397-33-7
143.	Hydrogen	2 t	50 t	1333-74-0
144.	Liquid oxygen	200 t		7782-44-7
145.	Methyl ethyl ketone peroxide (concentration — 60%)	5 t		1338-23-4
146.	Methyl isobutyl ketone peroxide (concentration 60%)	50 t		37206-20-5
147.	Peracetic acid (concentration 60%)	50 t		79-21-0
148.	Propylene oxide	5 t		75-56-9
149.	Sodium chlorate	25 t		7775-09-9

GROUP 4 — EXPLOSIVE SUBSTANCES

150.	Barium azide	50 t		18810-58-7
151.	Bis (2, 4, 6-trinitrophenyl) amine	50 t		131-73-7
152.	Chlorotrinitrobenzene	50 t		28260-61-9
153.	Cellulose nitrate (containing 12.6% Nitrogen)	50 t		9004-70-0
154.	Cyclotetramethylenetetranitramine	50 t		2691-41-0
155.	Cyclotrimethylenetrinitramine	50 t		121-82-4
156.	Diazodinitrophenol	10 t		7008-81-3
157.	Diethylene glycol dinitrate	10 t		693-21-0
158.	Dinitrophenol, salts	50 t		
159.	Ethylene glycol dinitrate	10 t		628-96-6
160.	1-Guanyl-4-nitrosaminoguanyl-1-tetrazene	10 t		109-27-3
161.	2, 2', 4, 4', 6, 6'-Hexanitrostilbene	50 t		20062-22-0
162.	Hydrazine nitrate	50 t		13464-97-6
163.	Lead azide	50 t		13424-46-9
164.	Lead styphnate (Lead 2, 4, 6- trinitroresorcinol oxide)	50 t		15245-44-0
165.	Mercury fulminate	10 t		20820-45-5
				628-86-4
166.	N-Methyl-N, 2, 4, 6-tetranitroaniline	50 t		479-45-8
167.	Nitroglycerine	10 t	10 t	55-63-0
168.	Pentaerythritol tetranitrate	50 t		78-11-5
169.	Picric acid (2,4, 6-Trinitrophenol)	50 t		88-89-1
170.	Sodium picramate	50 t		831-52-7
171.	Styphnic acid (2, 4, 6-Trinitroresorcinol)	50 t		82-71-3
172.	1, 3, 5-Triamino-2, 4, 6-trinitrobenzene	50 t		3058-38-6
173.	Trinitroaniline —	50 t		26952-42-1

1.	2.	3.	4.	5.
174.	2, 4, 6-Trinitroanisole.	50 t		606-35-9
175.	Trinitrobenzene	50 t		25377-32-6
176.	Trinitrobenzoic acid	50 t		35860-50-5
				129-66-8
177.	Trinitrocresol	50 t		28905-71-7
178.	2, 4, 6-Trinitrophenitole	50 t		4732-14-3
179.	2, 4, 6-Trinitrotoluene	50 t	50 t	118-96-7

PART - II

Classes of substances not specifically named in Part I

1.	2.	3.	4.	5.
GROUP 5-FLAMMABLE SUBSTANCES				
1.	Flammable gases: Substances which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below;	15 t	200 t	
2.	Highly flammable liquids: Substances which has a flash point lower than 23°C and the boiling point of which at normal pressure is above 20°C;	1000 t	50 000 t	
3.	Flammable liquids: Substances which have a flash point lower than 65°C and which remain liquid under pressure where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.	25 t	200 t	

- (1) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight and aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90% by weight.
- (2) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight (a compound fertilizer contains ammonium nitrate together with phosphate and/or potash).

SCHEDULE 4

[See rule 2 (h) (i)]

1. Installations for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among others:

- alkylation
- Amination by ammonolysis
- carbonylation
- condensation
- dehydrogenation
- esterification
- halogenation and manufacture of halogens
- hydrogenation
- hydrolysis
- Oxidation
- polymerization
- sulphonation
- desulphurization, manufacture and transformation of sulphur-containing compounds
- nitration and manufacture of nitrogen-containing compounds
- manufacture of phosphorous-containing compounds
- formulation of pesticides and of pharmaceutical products
- distillation
- extraction
- solvation
- mixing

2. Installations for distillation, refining or other processing of petroleum or petroleum products.

3. Installations for the total or partial disposal of solid or liquid substances by incineration or chemical decomposition.

4. Installations for "production, processing or treatment of energy gases, for example, LPG, LNG, SNG.

5. Installations for the dry distillation of coal or lignite.

6. Installations for the production of metals or non-metals by a wet process or by means of electrical energy.

SCHEDULE - 5

[See Rules 2(b) and (3)]

Sl. No.	Authority (ies) with legal backing	Duties and corresponding Rule
1	2	3
1.	Ministry of Environment and Forests under Environment (Protection) Act, 1986.	(1) Notification of hazardous chemicals as per Rules 2(e) (i) 2(e) (ii) & 2(e) (iii)
2.	Chief Controller Imports & Exports under Import & Export (Control) Act, 1947.	Import of hazardous chemicals as per Rule 18.
3.	Central Pollution Control Board or State Pollution Control Board under Environment (Protection) Act, 1986 as the case may be.	(1) Enforcement of directions and procedures in respect of isolated storage of hazardous chemicals, regarding. <ul style="list-style-type: none"> (i) Notification of major accidents as per Rules 5(1) and 5(2) (ii) Notification of sites as per Rules 7 to 9. (iii) Safety reports in respect of isolated storages as per Rule 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13. (2) Import of hazardous chemicals and enforcement of directions and procedures on import of hazardous chemicals as per Rule 18.
4.	Chief Inspector of Factories appointed under the Factories Act, 1948.	Enforcement of directions and procedures in respect of industrial installations and isolated storages dealing with hazardous chemicals and pipelines including inter-state pipelines regarding, — <ul style="list-style-type: none"> (i) Notification of major accidents as per Rule 5(1) and 5(2). (ii) Notification of sites as per Rules 7-9. (iii) Safety reports as per Rules 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13. (v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per Sr. No. 9 of this Schedule.
5.	Chief Inspector of Dock Safety appointed under the Dock Workers (Safety, Health and Welfare) Act, 1986.	Enforcement of directions and procedures in respect of industrial installations and isolated storages dealing with hazardous chemicals and pipelines inside a port regarding. — <ul style="list-style-type: none"> (i) Notification of major accidents as per Rules 5(1) and 5(2). (ii) Notification of sites as per Rules 7 to 9. (iii) Safety reports as per Rules 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13. (v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per S. No. 9 of this Schedule.
6.	Chief Inspector of Mines appointed under the Mines Act, 1952.	Enforcement of directions and procedures in respect of industrial installations and isolated storages dealing with the hazardous chemicals and pipelines including inter-state pipelines regarding. — <ul style="list-style-type: none"> (i) Notification of major accidents as per Rule 5(1) and 5(2). (ii) Notification of sites as per Rules 7 to 9. (iii) Safety reports as per Rules 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13. (v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per S. No. 9 of this Schedule.
7.	Atomic Energy Regulatory Board appointed under the Atomic Energy Act, 1972.	Enforcement of directions and procedures as per the provisions of the Atomic Energy Act, 1972.
8.	Chief Controlled of Explosives appointed under the Indian Explosives Act and Rules, 1983.	Enforcement of directions and procedures as per the provisions of the Indian Explosives Act and Rules, 1983.
9.	District Collector of District Emergency Authority designated by the State Government.	Preparation of off-site emergency plans as per Rule 14.

SCHEDULE 6

[See rule 5(1)]

Information to be furnished regarding notification of a major accident

Report number
of the particular accident.

1. General data

- (a) Name of the site
- (b) Name and address of the manufacturer
(Also state telephone/telex number)
- (c) (i) Registration number
(ii) Licence number
(As may have been allotted under any statute
applicable to the site, e.g. the Factories Act)
- (d) (i) Nature of industrial activity (Mention what
is actually manufactured, stored etc.)
(ii) National Industrial Classification, 1987 at the
four digit level.

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2. Type of major accident

Explosion

Fire

Emission of
dangerous
substance

Substance(s) Emitted

3. Description of the major accident

- (a) Date, shift and hour of the accident
- (b) Department/Section and exact place where the
accident took place
- (c) The process/Operation undertaken in the Depart-
ment/Section where the accident took place.
(Attached a flow chart, if necessary)
- (d) The circumstances of the accident and the dan-
gerous substance involved.
4. Emergency measures taken and measures envisaged
to be taken to alleviate short term effects of the
accident.
5. Causes of the major accident.

Known (to be specified)

Not known

Information will be supplied as soon as possible.

6. Nature and extent of damage

- (a) Within the establishment — casualties

..... Killed

..... Injured

..... Poisoned

persons exposed to the major accident —

material damage

danger is still present

danger no longer exists

(b) Outside the establishment casualties

.....	Killed
.....	Injured
.....	Poisoned

persons exposed to the major accident

material damage

damage to environment

the danger is still present

the danger no longer exists

7 Data available for assessing the effects of the accident on persons and environment.

8. Steps already taken or envisaged

(a) to alleviate medium or long term effects of the accident.

(b) to prevent recurrence of similar major accidents

(c) Any other relevant information.

SCHEDULE 7

[See rule 7 (1)]

Information to be furnished for the Notification of Sites

PART—I

Particulars to be included in a notification of a site.

1. The name and address of the employer making the notification.
2. The full postal address of the site where the notifiable industrial activity will be carried on.
3. The area of the site covered by the notification and of any adjacent site which is required to be taken into account by virtue of b(ii) of Schedules 2 and 3.
4. The date on which it is anticipated that the notifiable industrial activity will commence, or if it has already commenced a statement to that effect.
5. The name and maximum quantity liable to be on the site of each dangerous substance for which notification is being made.
6. Organisation structure, namely organisation diagram for the proposed industrial activity and set up for ensuring safety and health.
7. Information relating to the potential for major accidents, namely —
 - (a) identification of major accident hazards;
 - (b) the conditions or events which could be significant in bringing one about;
 - (c) a brief description of the measures taken
8. Information relating to the site namely —
 - (a) a map of the site and its surrounding area to a scale large enough to show any features that may be significant in the assessment of the hazard or risk associated with the site. —
 - (i) area likely to be affected by the major accident.
 - (ii) population distribution in the vicinity.
 - (b) a scale plan of the site showing the location and quantities of all significant inventories of the hazardous chemicals;
 - (c) a description of the process or storage involving the hazardous chemicals and an indication of the conditions under which it is normally held;
 - (d) the maximum number of persons likely to be present on site.
9. The arrangement for training of workers and equipment necessary to ensure safety of such work.

PART II

Particulars to be included regarding pipeline —

1. The names and the address of the person making the notification.
2. The full postal address of the place from which the pipeline activity is controlled, addresses of the places where the pipeline starts and finishes and a map showing the pipeline route drawn to a scale of not less than 1 : 400000
3. The date on which it is anticipated that the notifiable activity will commence, or if it is already commenced a statement to that effect.
4. The total length of the pipeline, its diameter and normal operating pressure and the name and maximum quantity liable to be in the pipeline of each hazardous chemical for which notification is being made.

SCHEDULE 8

[See rule 10(1)]

Information to be furnished in a Safety Report

1. The name and address of the person furnishing the information.
2. Description of the industrial activity, namely—
 - (a) site,
 - (b) construction design,
 - (c) protection zones explosion protection, separation distances,
 - (d) accessibility of plant,
 - (e) maximum number of persons working on the site and particularly of those persons exposed to the hazard.
3. Description of the processes, namely—
 - (a) technical purpose of the industrial activity,
 - (b) basic principles of the technological process,
 - (c) process and safety-related data for the individual process stages,
 - (d) process description,
 - (e) safety-related types of utilities.
4. Description of the hazardous chemicals, namely—
 - (a) chemicals (quantities, substance data, safety-related data, toxicological data and threshold values),
 - (b) the form in which the chemical may occur on or into which they may be transformed in the event of abnormal conditions,
 - (c) the degree of purity of the hazardous chemical.
5. Information on the preliminary hazard analysis, namely—
 - (a) types of accident,
 - (b) system elements or events that can lead to a major accident,
 - (c) hazards,
 - (d) safety—relevant components.
6. Description of safety—relevant units, among others;
 - (a) Special design criteria,
 - (b) controls and alarms,
 - (c) special relief systems,
 - (d) quick-acting valves,
 - (e) collecting tanks/dump tank,
 - (f) sprinkler system,
 - (g) fire-fighting etc.
7. Information on the hazard assessment, namely—
 - (a) identification of hazards,
 - (b) the causes of major accidents,
 - (c) assessment of hazards according to their occurrence frequency,
 - (d) assessment of accident consequences,
 - (e) safety systems,
 - (f) known accident history.
8. Description of information on organisational systems used to carry on the industrial activity safety, namely—
 - (a) maintenance and inspection schedules,
 - (b) guidelines for the training of personnel,
 - (c) allocation and delegation of responsibility for plant safety,
 - (d) implementation of safety procedures.
9. Information on assessment of the consequences of major accidents, namely—
 - (a) assessment of the possible release of hazardous chemicals or of energy
 - (b) possible dispersion of released chemical
 - (c) assessment of the effects of the releases (size of the affected area, health effects, property damage).
10. Information on the mitigation of major accidents, namely—
 - (a) fire brigade
 - (b) alarm systems,

- (c) emergency plan containing system of organisation used to fight the emergency, the alarm and the communication routes, guidelines for fighting the emergency, information about hazardous chemicals, examples of possible accident sequences,
- (d) coordination with the District Emergency authority and its off-site emergency plan,
- (e) notification of the nature and scope of the hazard in the event of an accident,
- (f) antidotes in the event of a release of a hazardous chemical.

SCHEDULE 9

(See Rule 17)

Safety Data Sheet

1. CHEMICAL IDENTITY

Chemical Name		Chemical Classification	
Synonyms		Trade Name	
Formula		C.A.S. No.	U.N. No.:
Regulated Identification	Shipping Name Codes/Label	Hazchem No.	
	Hazardous Waste I.D. No.:		
Hazardous Ingredients	C.A.S. No.	Hazardous Ingredients	C.A.S. No.
1.		3.	
2.		4.	

2. PHYSICAL AND CHEMICAL DATA

Boiling Range/Point	°C	Physical State	Appearance
Melting/Freezing Point	°C	Vapour Pressure @ 35°C	mm Hg
Vapour Density (Air = 1)		Solubility in water @ 30°C	Others
Specific Gravity		Water = 1	
pH			

3. FIRE AND EXPLOSION HAZARD DATA

Flammability Yes/No	LEL	% Flash Point °C	Autoignition Temperature °C
TDG Flammability	UEL	% Flash Point °C	Hardous Combustion Products
Explosion Sensitivity to Impact		Explosion Sensitivity to Static Electricity	
Hazardous Polymerisation			
Combustible Liquid	Explosive Material	Corrosive Material	
Flammable Material		Oxidiser	Others
Pyrophoric Material		Organic Peroxide	

4. REACTIVITY DATA

Chemical Stability
Incompatibility with other Material
Reactivity

Hazardous Reaction
Products

5. HEALTH HAZARD DATA

Routes of
EntryEffects of
Exposure/SymptomsEmergency
Treatment

TLV (ACGIH)	ppm	mg/m ³	STEL	ppm	mg/m ³
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Permissible Exposure Limit LD ₅₀	ppm	mg/m ³	Odour Threshold LD ₅₀	ppm	mg/m ³
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NFPA Hazard Signals	Health	Flammability	Stability	Special
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6. PREVENTIVE MEASURES

Personnel
Protective
EquipmentHandling and
Storage
Precautions

7. EMERGENCY AND FIRST AID MEASURE

FIRE

FIRE EXTINGUISHING
Media

FIRE

Special Procedures

Unusual Hazards

EXPOSURE

First Aid Measures

Antidotes/Dosages

SPILLS

Steps to be taken

Waste Disposal Method

8. ADDITIONAL INFORMATION/REFERENCES

9. MANUFACTURER/SUPPLIERS DATA

Name of Firm
Mailing Address
Telephone/Telex Nos.
Telegraphic AddressContact Person
in EmergencyLocal Bodies
involvedStandard
PackingTremcard
Details/Ref

Other

10. DISCLAIMER

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

SCHEDULE 10

[See Rule 18(5)]

(Format for maintaining records of hazardous chemicals imported)

1. Name and address of the Importer:
2. Date and reference number of issuance of permission to import hazardous chemicals:
3. Description of hazardous chemicals:
 - (a) Physical form:
 - (b) Chemical form:
 - (c) Total volume and weight (in kilogrammes/tonnes)
4. description of purpose of import:
5. Description of storage of hazardous chemicals:
 - (a) Date:
 - (b) Method of storage

[17(1)/87-PL/HSMD]

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